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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,037

06/07/2006

Hirofumi Higashi

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EXAMINER

STIMPert, PHILIP EARL

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

06/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,037	Applicant(s) HIGASHI ET AL.	
	Examiner Philip Stimpert	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/7/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 5, the claim recites "the shape varying member of the valve fixing part expands or contracts in length so as to change a fixed length of the reed valve." This claim is indefinite in several respects. First, it is unclear how a length which is changed may simultaneously be considered fixed. Second, it is unclear how a change in length of the shape varying member, itself an element of the valve retainer, may affect the length of the reed valve. As a result, the claim is rendered indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pre-Grant Publication 2002/0157717 to Hong (Hong).

6. Regarding claim 1, Hong teaches a compressor (1) comprising a compression mechanism (25) configured to compress fluid, the mechanism including a discharge port

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(113). Hong also teaches a reed valve (120), a valve retainer (130) coupling the reed valve to the discharge port (130), and that the valve retainer is composed of a shape varying member (130) that varies in shape in response to an external input force (spring force from 145) so as to change an opening/closing state of the reed valve (120).

7. Regarding claim 2, Hong teaches that the valve retainer includes a valve fixing part (surrounding bolt 170) for fixing a fixed part (also surrounding bolt 170) of the reed valve (120) and a projecting curved guiding part for restricting a rightmost valve part of the reed valve to a lift amount (as shown in Figs. 3-5), and that the guiding part is the shape varying member which varies the lift amount of the valve part.

8. Regarding claim 3, Hong teaches that the shape varying member of the guiding part changes in a warp amount (see Figs. 4 and 5 particularly) so as to change a curve of the shape varying member and of the reed valve (120).

9. Regarding claim 4, Hong teaches that the valve retainer includes a valve fixing part (surrounding bolt 170) for fixing a fixed part (also surrounding bolt 170) of the reed valve (120) and a projecting curved guiding part for restricting a rightmost valve part of the reed valve to a lift amount (as shown in Figs. 3-5), and that the guiding part is the shape varying member which varies a rigidity of the valve part (paragraph 36, load adjustment of reed valve).

10. Regarding claim 5, as the shape varying member of the valve fixing part and the reed valve bend, their opposite faces will expand and contract respectively, thus changing their lengths.

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Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hong in view of US patent 4,432,311 to Holtzberg et al (Holtzberg).

13. Hong teaches the invention of claim 1 from which claim 6 depends, as discussed above, but does not teach that the shape varying member is formed of polymer.

Holtzberg teaches a composite, polymer valve spring retainer for use in an engine.

Holtzberg teach the use of polymers which are lighter and stronger than metals in fluid machines such as engines and compressors, providing the benefit of decreased weight and quieter performance (col. 1, ln. 46-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the shape varying member of Hong from polymer, as taught by Holtzberg, in order to reduce the weight of that component and thereby that of the system as a whole.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Stimpert whose telephone number is (571)270-1890. The examiner can normally be reached on Mon-Fri 7:30AM-4:00PM, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

/P. S./
Examiner, Art Unit 3746
19 June 2009